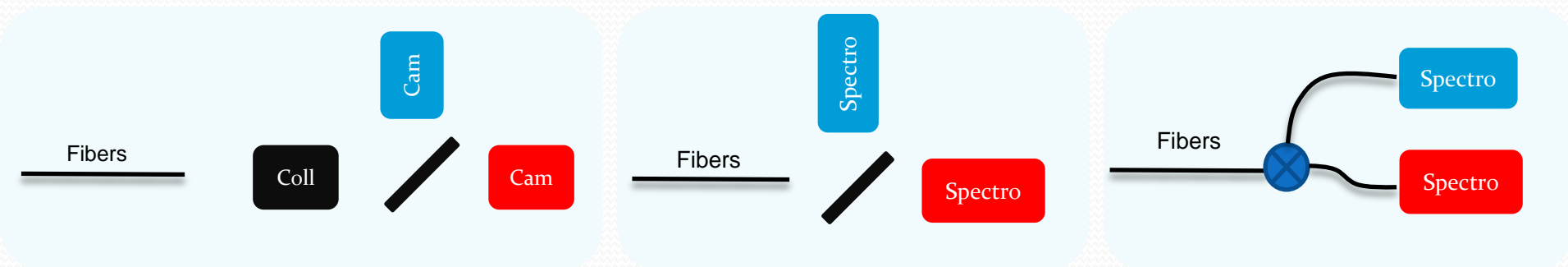


Spectrographs

Baseline discussion for proposal

- Optical Design Options:
 - Option A: Boss Like (not real explored)
 - Option B: Wavelength separation prior the collimator
 - Option C: Wavelength separation prior the slit entrance

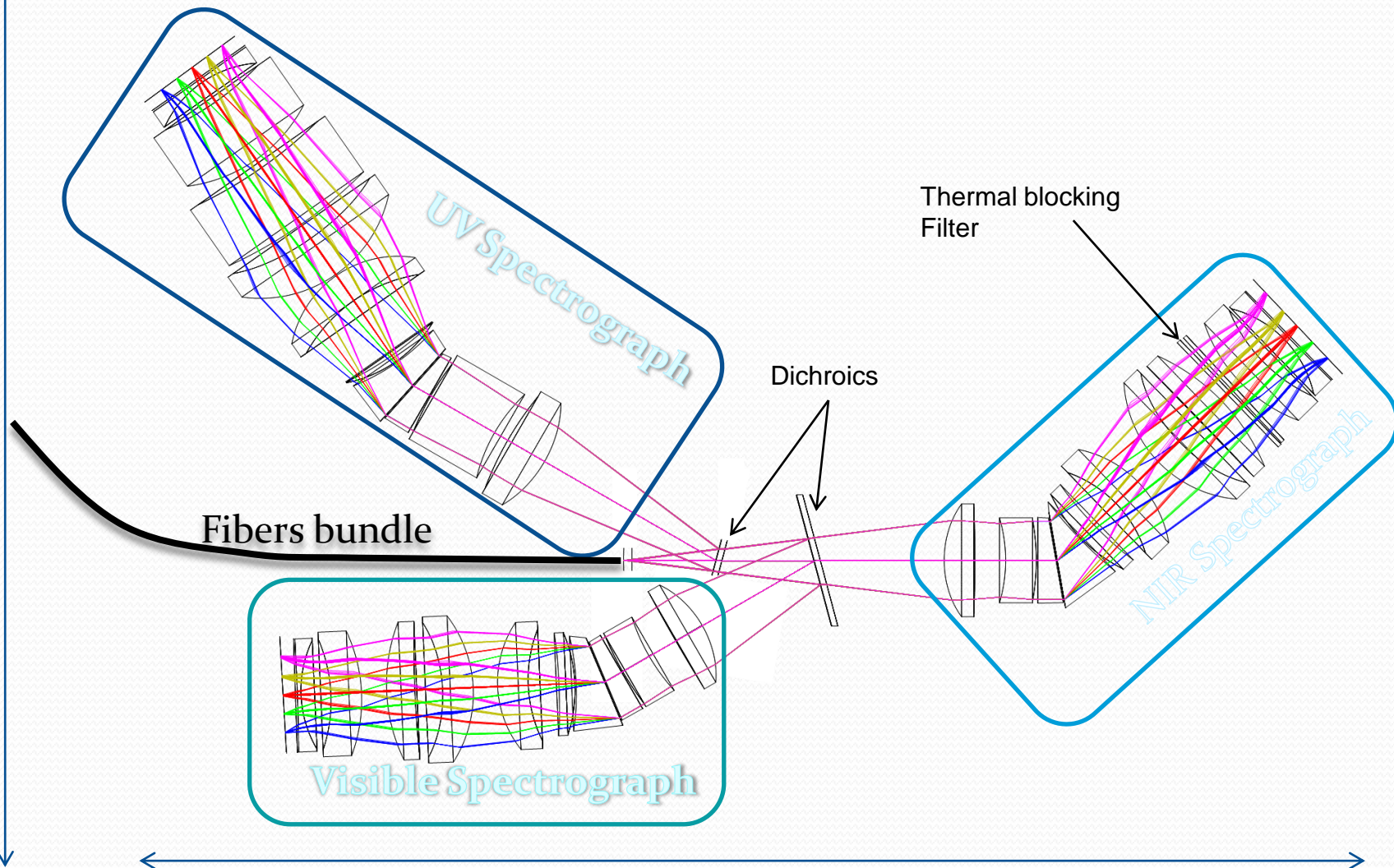


Starting point proposal

- Fiber core: 120 μm ?
- F/4.5 entrance beam
- F/4 coupling in the spectrograph
- F/2 beam on detector
- Detector: HgCdTe??? Yes or no?

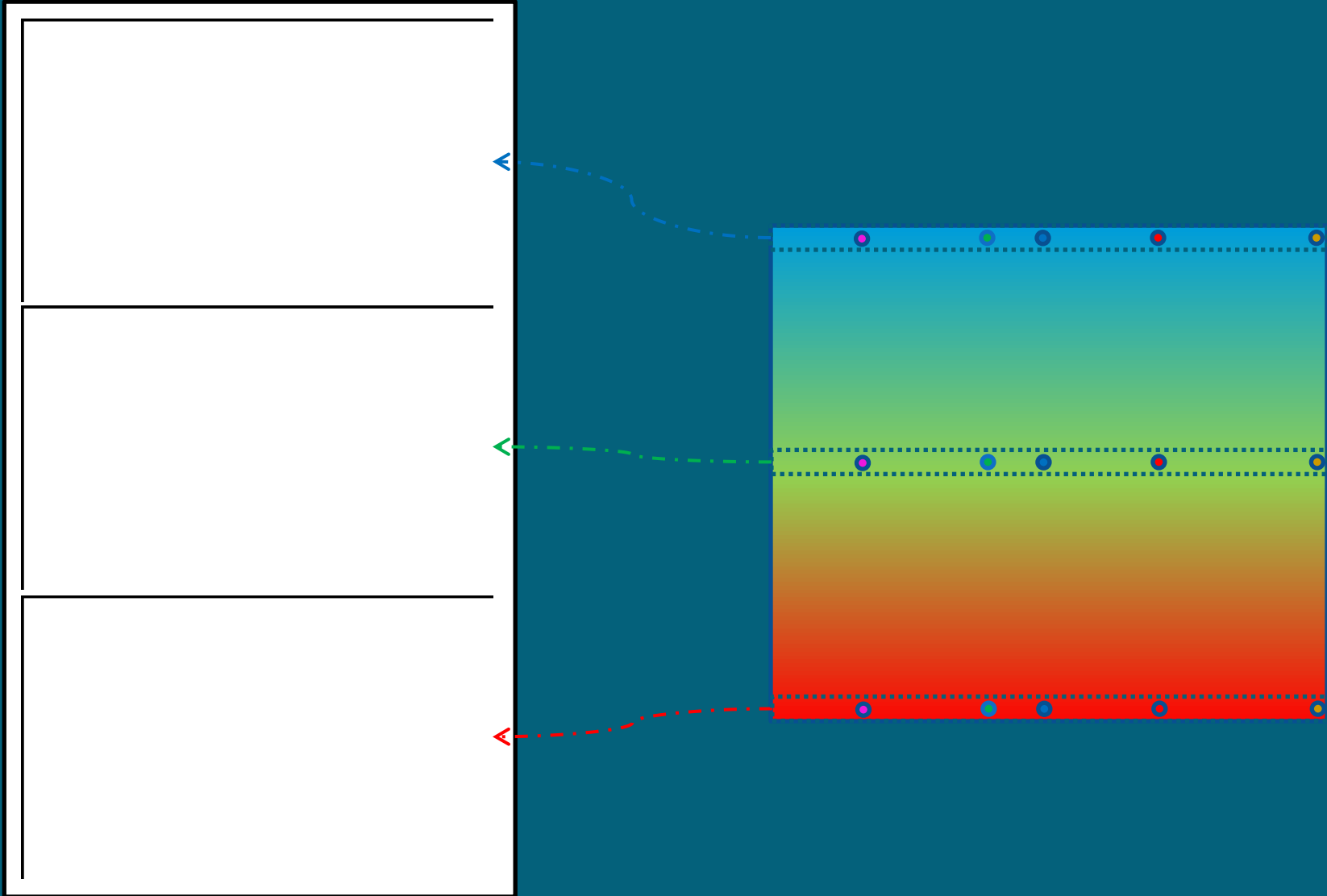
Option B

Width: 750 mm

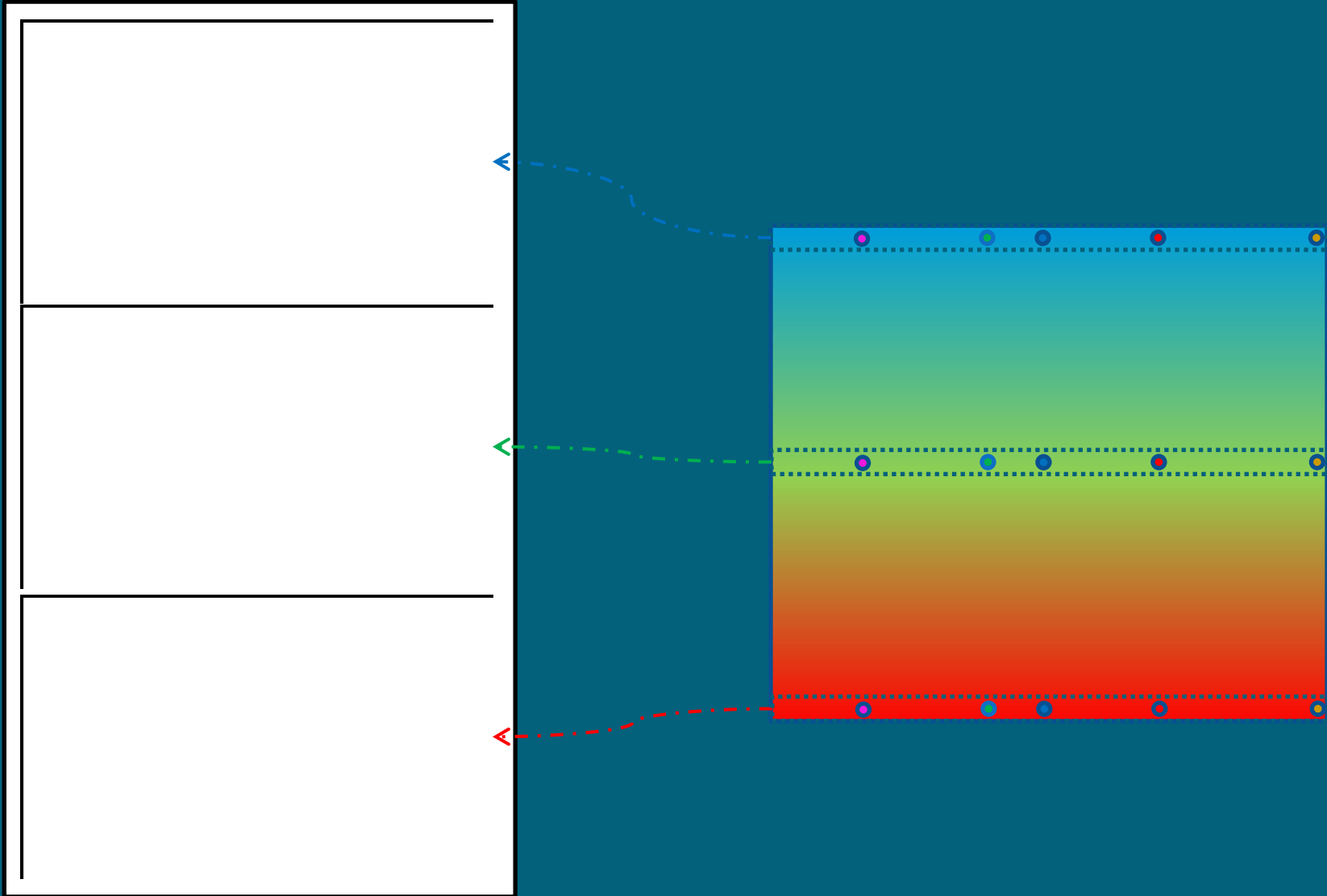


Length: 1000 mm
Thickness: 250 mm

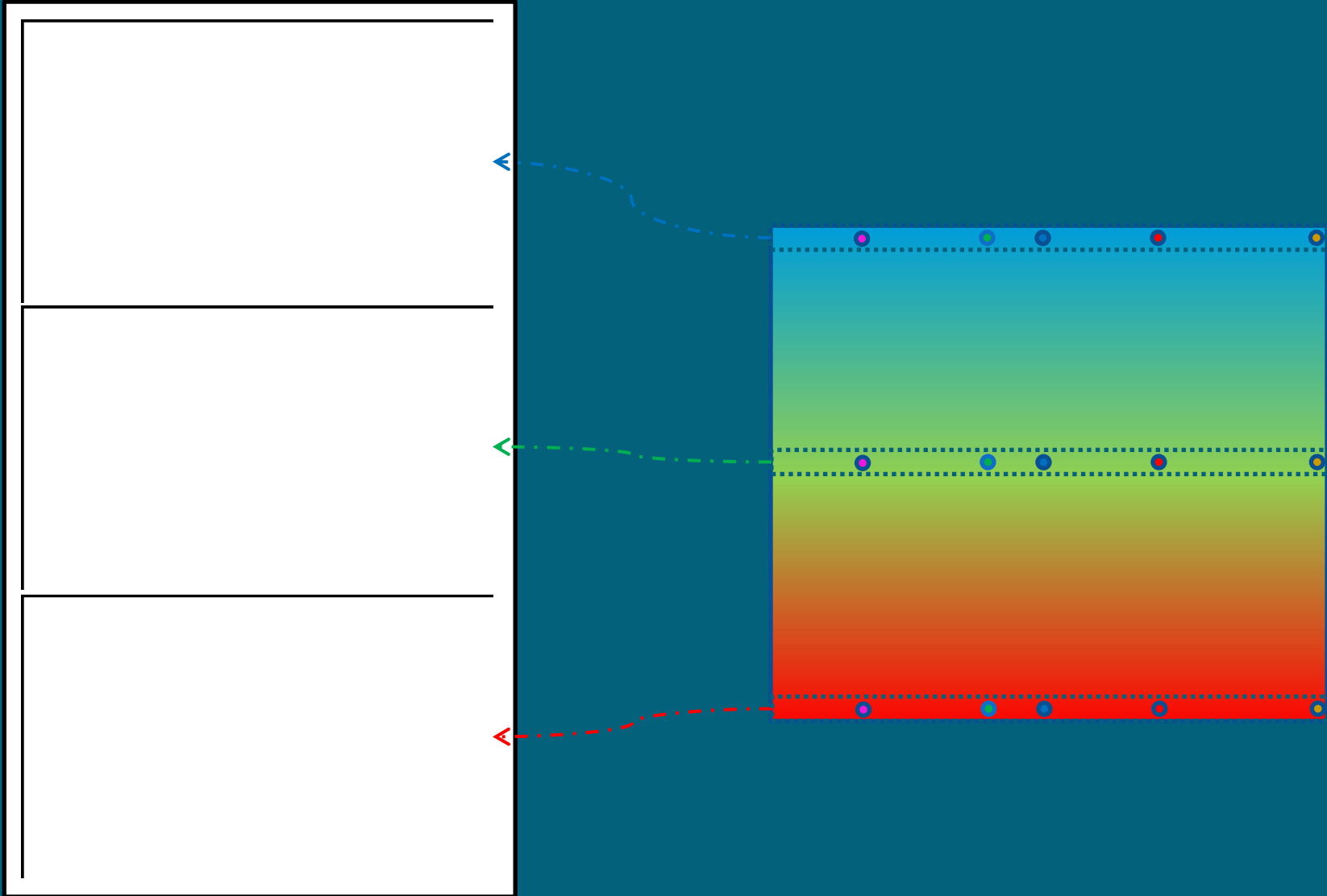
Encircled energy - UV



Encircled energy - Visible



Encircled energy - NIR

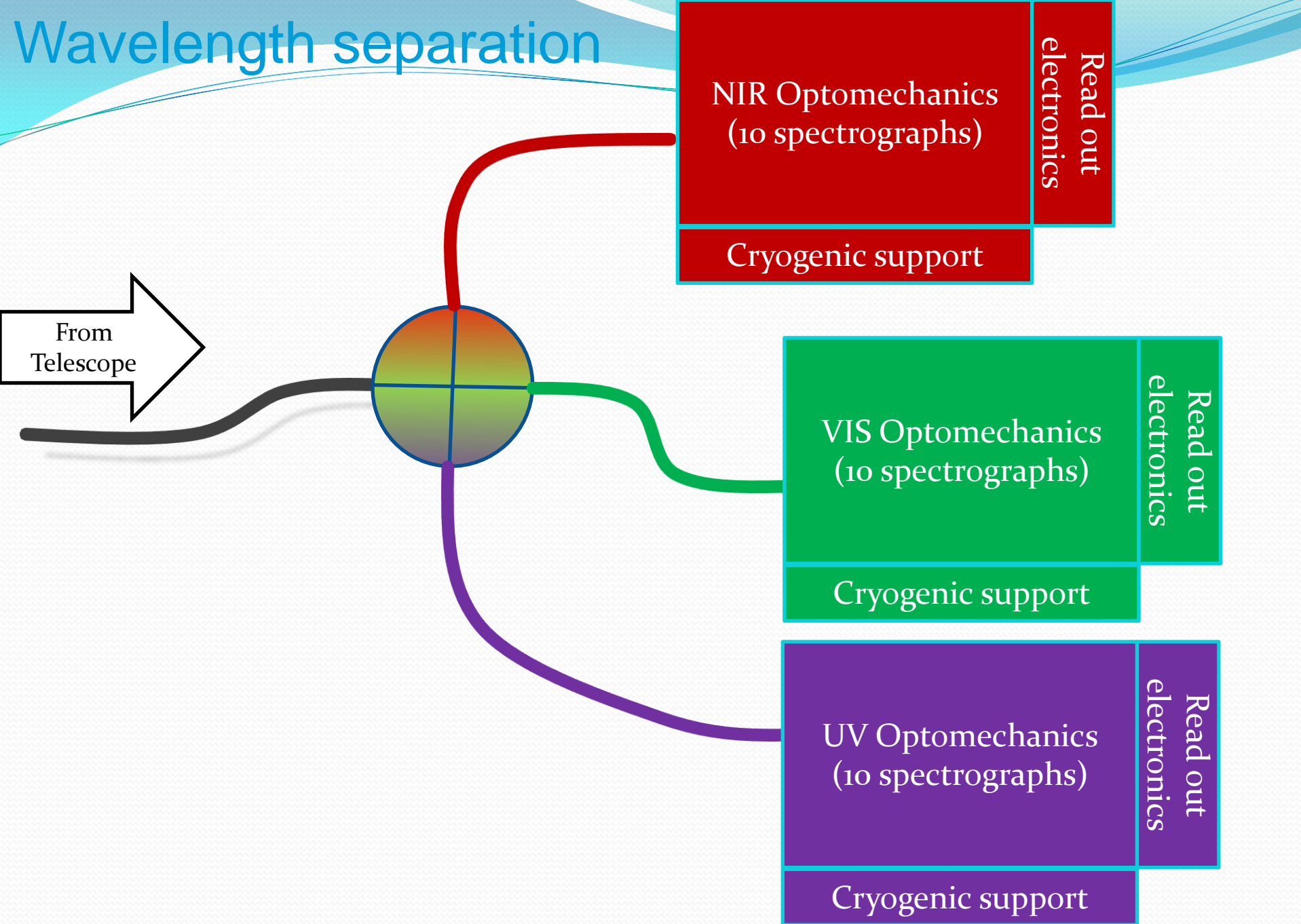


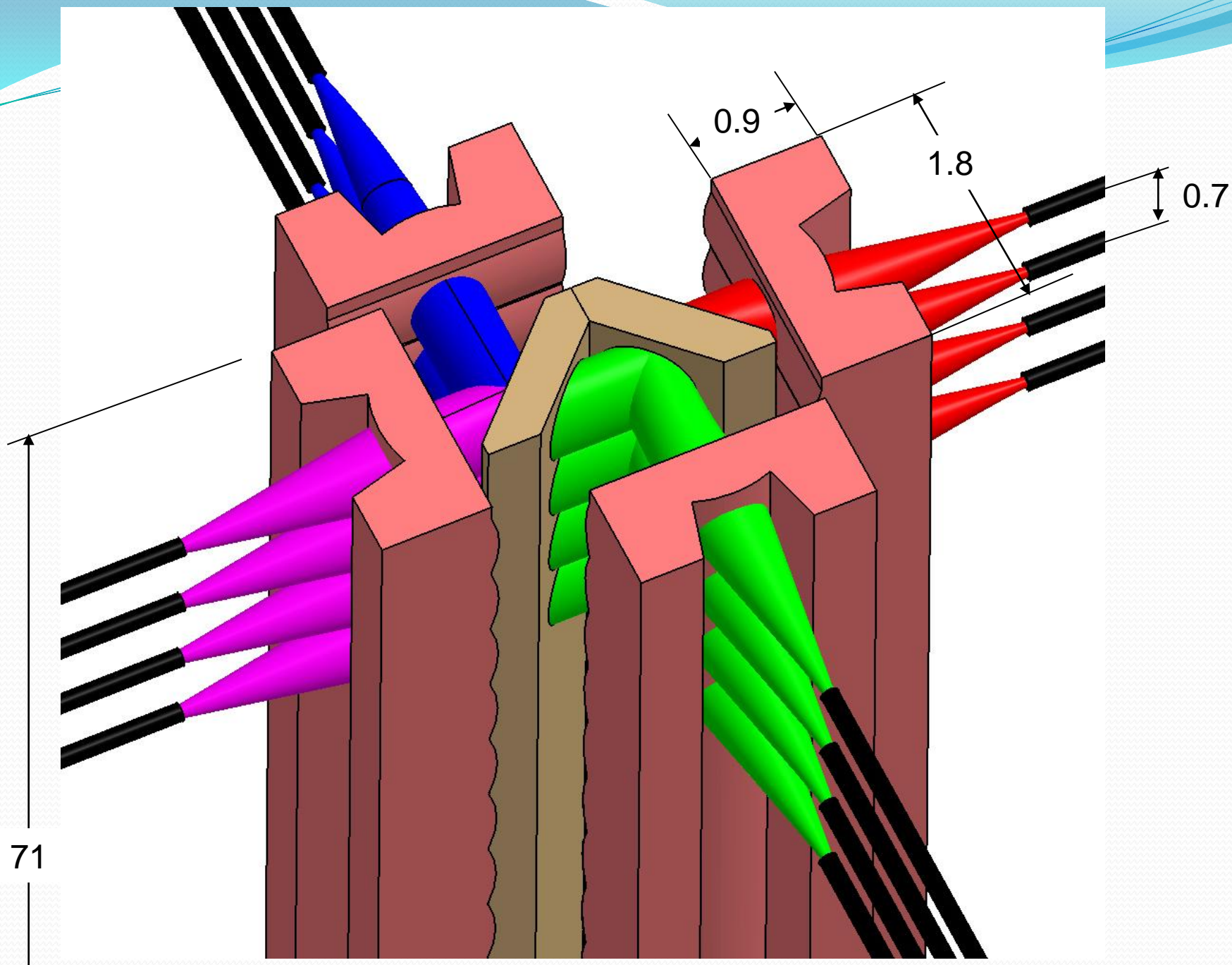
Option C

Similarity with option B

- Spectrograph are quasi similar
 - Spectrograph opto mechanics similar
 - Cryostat quasi similar
-
- Will permit to trade in function of cryogenic support, structure and Integration and tests

Wavelength separation





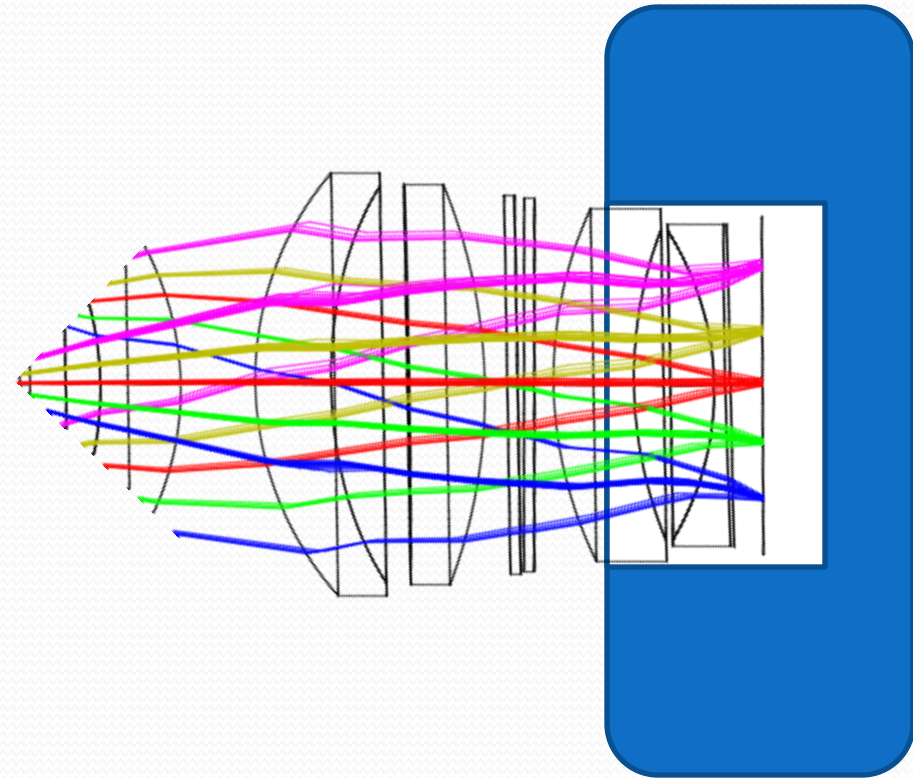
Preliminary budget for band splitter

- Microlenses
 - Tooling: 100k€
 - Manufacturing: 1k€ each
- Dichroics:
 - Substrate: 50k€
 - Coating: 50k€
- Mechanics and tooling: 100k€
- Total: ~500k€

Cryostat definition

Entrance windows

- Last doublet?
- Positionning tolerance?
- Exchangeable cameras?:
 - Effort in interface standardisation
 - Optimized AIT plan



On going activity

- Thermal dimensioning (cryostats, cooling)
- Preliminary french deliverable list and WBS
- Tolerance analysis
- Preliminary opto-mechanical concept started (option B & C)
- Preliminary interface definition

Future activity

- Grating investigation
- Prototyping plan definition (option B & C)
- AIT/AIV Plan requirement

